NHDOT SPR2 PROGRAM

RESEARCH PROGRESS REPORT

Project # *26962S*		**Report Period** Year *2016* ☐Q1 (Jan-Mar) ☐Q2 (Apr-Jun) ☐Q3 (Jul-Sep) ☒Q4 (Oct-Dec)
Project Title: *Assessing lower impulse load levels on reinforced asphalt pavement*		
Project Investigator: *Lynette Barna* **Phone: 603-646-4503**		**E-mail: Lynette.A.Barna@usace.army.mil**
Project Start Date: *03 January 2017*[a] *(30 November 2016)*	**Project End Date:** *03 January 2018*	**Project schedule status:** ☐On schedule ☐ Ahead of schedule ☐ Behind schedule Project not started yet

[a] *Project start date per Cooperative Research and Development Agreement (CRADA)*

Brief Project Description:

NHDOT installed fiberglass grid reinforcement in several flexible roadways throughout the state in an effort to address fatigue cracking and extend the service life. Coefficient values for fiberglass reinforced asphalt pavement are needed for design. Data collected during the fall of 2014 from impulse load testing at three test sections representing the thin asphalt layer will be analyzed to determine coefficient values for design. The field data was collected on NH Route 101 using Falling Weight Deflectometer [FWD] and Lightweight Deflectometer [LWD] pavement testing equipment. The data analysis will evaluate the FWD deflection measurements at the lower load levels and the LWD data to determine the possible benefit of reinforcing grid in the asphalt layer.

Progress this Quarter (include meetings, installations, equipment purchases, significant progress, etc.):

No updates for this time period.
Partial project funding was received at CRREL on 03 January 2017 and available to begin project execution on 24 January 2017.

Items needed from NHDOT (i.e., Concurrence, Sub-contract, Assignments, Samples, Testing, etc…):

Schedule a project kick-off meeting during 1st Quarter (Jan-Mar 2017)

Anticipated research next three (3) months:

Describe what is expected to take place in the next quarter with a focus on the progress or items needed from NHDOT.
Task 1a:
Prepare the FWD data at 6, 9, and 12 kip load levels, for backcalculation:
- use existing templates to process FWD data;
- check deflection data for decreasing deflection readings;
- adjust deflection data for ambient air temperature conditions;
- normalize deflection data to a common load level;
- prepare the layered pavement structure;
- select a representative basin for each load level for further analysis.

Circumstances affecting project:

Tasks (from Work Plan)	Planned % Complete	Actual % Complete
4th Quarter (Oct-Dec 2016) *No tasking*	--------	--------
Project Requirements 1st Quarter (Jan-Mar) *Project work acceptance documents and project setup*	*100*	*100*
Task 1a 1st Quarter (Jan-Mar) *Prepare the FWD data at 6, 9, and 12 kip load levels, for back calculation.*	*100*	*10%*